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(54) Title: HUMANIZED ANTIBODIES THAT RECOGNIZE BETA AMYLOID PEPTIDE

(57) Abstract: The invention provides improved agents and methods for treatment of diseases associated with amyloid deposits of A $\beta$  in the brain of a patient. Preferred agents include humanized antibodies.

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/07503

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 39/395, 39/40, 39/42; C07K 16/00  
US CL : 424/130.1, 141.1, 142.1; 530/387.1, 387.3, 388.1, 388.15

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 424/130.1, 141.1, 142.1; 530/387.1, 387.3, 388.1, 388.15

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2004/0043418 A1 (HOLTZMAN ET AL.) 04 March 2004 (04.03.2004), entire document.	1-62 and 79-81
A	US 2004/0241164 A1 (BALES ET AL.) 02 December 2004 (02.12.2004), entire document.	1-62 and 79-81
A	US 2004/0265919 A1 (VANDERSTICHELE ET AL.) 30 December 2004 (30.12.2004), entire document.	1-62 and 79-81
A	VANDERSTICHELE, H. ET AL. Standardization of Measurement of b-amyloid(1-42) in Cerebrospinal Fluid and Plasma. Amyloid: Int. J. Exp. Clin. Invest. December 2000, Vol. 7, No. 4, pages 245-258, entire document.	1-62 and 79-81
A	BACSKAI, B.J. ET AL. Non-Fc-Mediated Mechanisms Are Involved in Clearance of Amyloid-b In Vivo by Immunotherapy. The Journal of Neuroscience. 15 September 2002, Vol. 22, No. 18, pages 7873-7878, entire document.	1-62 and 79-81



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"B" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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## INTERNATIONAL SEARCH REPORT

International application No.

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### BOX III. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group 1, claim(s) 1-62 and 79-81, drawn to the 3D6 antibody, a method of preventing or treating an amyloidogenic disease in a patient comprising using the 3D6 antibody, and pharmaceutical compositions comprising same and a method of producing the 3D6 antibody or fragment thereof.

Group 2, claim(s) 63-71 and 138-141, drawn to an isolated polypeptide comprising SEQ ID NO: 2 and 4, variants comprising same.

Group 3, claim(s) 72-78, drawn to an isolated nucleic acid encoding the 3D6 antibody, vectors, and host cell comprising same.

Group 4, claim(s) 82-83 and 157-158, drawn to a method for identifying residues amenable to substitution in a humanized immunoglobulin variable framework region.

Group 5, claim(s) 84-137 and 154-156, drawn to the 10D5 antibody, a method of preventing or treating an amyloidogenic disease in a patient comprising using the 10D5 antibody, and pharmaceutical compositions comprising same and a method of producing the 10D5 antibody or fragment thereof.

Group 6, claim(s) 142-146, drawn to an isolated polypeptide comprising SEQ ID NO: 14 and 16, variants comprising same.

Group 7, claim(s) 147-153, drawn to an isolated nucleic acid encoding the 10D5 antibody, vectors, and host cell comprising same.

The inventions listed as Groups 1-9 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Group 1 is drawn to the special technical feature of 3D6 antibody, a method of preventing or treating an amyloidogenic disease in a patient comprising using the 3D6 antibody, and pharmaceutical compositions comprising same, which is not required by any of the other groups.

Group 2 is drawn to the special technical feature of an isolated polypeptide comprising SEQ ID NO: 2 and 4, variants comprising same, which is not required by any of the other groups.

Group 3 is drawn to the special technical feature of an isolated nucleic acid encoding the 3D6 antibody, vectors, and host cell comprising same, which is not required by any of the other groups.

Group 4 is drawn to the special technical feature of a method for identifying residues amenable to substitution in a humanized immunoglobulin variable framework region, which is not required by any of the other groups.